

Apparatus and method of receiving order,  
storage medium, and method of point service

This application claims a priority based on Japanese  
5 Patent Application Nos. 2000-172045 and 2001-168488 filed  
on June 8, 2000, and June 4, 2001 respectively, the entire  
contents of which are incorporated herein by reference for  
all purposes.

## 10 Background of the Invention

### 1. Field of the Invention

The present invention relates to points given to a  
customer who has purchased a commodity etc., and, in  
particular, to point service in a business transaction  
15 performed online using a computer network.

### 2. Related Art Statement

Point service in which points are given to a customer  
according to an amount of his purchase is widely provided  
by actual stores with the intention of exciting customers'  
20 will to purchase or enclosing customers, for example. The  
point system is arranged such that points obtained by a  
customer have a monetary value, for example, in a store  
that has given those points. When a customer who has  
received points purchases a commodity in that store, he  
25 can allot those points to a part of its purchase price.

A customer tends to make a purchase in a store that  
provides point service, and to make a purchase next time  
and thereafter also in the same store so as to use obtained



unless the motive for purchasing the commodities themselves is strengthened. Accordingly, it is desired to develop a technique for increasing a sales number of a specific commodity while securing store's profit.

5       The present invention has been made considering such situations, and an object of the invention is to excite customers' will to purchase specific commodities.

10       To attain the above objects, the present invention provides a n order receiving apparatus that receives an order of commodity transaction from a commodity ordering apparatus through a network, comprising: a first storage means for storing commodity information that includes at least a commodity name and a selling price of a commodity as an object of transaction; a second storage means for storing information specifying combinations of two or more different commodities, and for storing specific parameters concerning economic return, which are applied respectively to said combinations, relating said information and said specific parameters, respectively; a third storage means for storing a general-purpose parameter concerning economic return, which is applied to commodities other than said combinations of commodities; and a means for performing steps of: receiving a request for displaying information on commodities, from said commodity ordering apparatus; referring to the first storage means, to output said commodity information to said commodity ordering apparatus; and referring to the second and third storage means, to output information on said combinations of

15

20

25

commodities and said specific parameters applied respectively to said combinations, and information on said general-purpose parameter, to said commodity ordering apparatus.

5 Further, the order receiving apparatus comprises a point generating means that performs steps of: receiving an order request including information for specifying ordered commodities, from said commodity ordering apparatus; judging if a group of the ordered commodities  
10 specified includes commodities related to a combination recorded in the second storage means; calculating first points when it is judged that the commodities related to the combination are included, said first points being decided based on a specific parameter applied to said  
15 combination, or based on the specific parameter applied to said combination and on selling prices of the commodities related to said combination; calculating second points with respect to commodities other than the commodities related to said combination, based on the general-purpose parameter, or based on the general-purpose parameter and selling prices  
20 of the commodities in question; and outputting total points of the first points and the second points, to said ordering apparatus.

Here, said general-purpose parameter is a value  
25 defining a rate to a selling price of a commodity; and said second points may be decided by multiplying the selling prices of the commodities in question by said rate.

Further, said specific parameter are values defining

rates to the selling prices of said specific commodities  
related to a certain combination of commodities,  
respectively; and said first points may be decided by  
multiplying the selling prices of the commodities in  
5 question by said rates, respectively.

#### Brief Description of the Drawings

Fig. 1 is a block diagram for explaining an outline  
of a network sales system according to the present  
10 invention;

Fig. 2 is a block diagram for explaining an outline  
of a customer apparatus;

Fig. 3 is a block diagram for explaining an outline  
of a store apparatus;

15 Fig. 4 is a diagram explaining data structure of a  
commodity database;

Fig. 5 is a diagram explaining data structure of a  
customer database;

20 Fig. 6 is a diagram explaining contents of a point  
setting file;

Fig. 7 is a block diagram showing point setting  
receiving processing in a store apparatus;

Fig. 8 is a view showing an example of a giving points  
setting screen;

25 Fig. 9 is a view showing another example of a specific  
point rate setting screen;

Fig. 10 is a flowchart explaining processing in which  
a store apparatus accepts access of a customer apparatus,



to such a configuration. For example, a plurality of customer apparatuses 1 and a plurality of store apparatuses may exist.

5 A store of a user of the store apparatus 2 sets up an online shop on Internet 3. An object of transaction in this online shop may be a commodity produced by the store, or may be a commodity made by another. Here, "commodity" may mean service.

10 A customer, i.e., a user of the customer apparatus 1 can access the online shop to order a desired commodity. To facilitate processing at that time, the store apparatus 2 may obligate the customer to register delivery address information, settlement information, and the like in advance of doing the online shopping. When the store  
15 receives the order in the store apparatus 2, the store follows the procedure for delivery to the customer. Here, the "order" includes an advance order.

20 In this online shop, in order to excite customer's incentive to purchase, points corresponding to an amount of purchase is given to a customer, when an order is received from the customer. Those points can be used within the online shop for receiving a discount corresponding to used points at the conversion rate of, for example, 1 yen to 1 point in the next purchase, or can be used for exchanging  
25 a prescribed number of points for a premium commodity.

In principle, the value of points given to a customer is obtained by multiplying an amount of purchase by a certain rate. However, when specific commodities are purchased

in a combination, points to be given can be calculated by applying a specific rate. By such an arrangement, it is possible to set a higher rate for a combination of commodities on which increase of sales number is desired and commodities whose popularity is higher. As a result, it is possible to excite customers' will to purchase that combination of commodities. Further, by combining some commodities as campaign commodities, and setting a higher rate for that combination, it is possible to provide additional service to customers, also.

Fig. 2 is an outline block diagram showing the customer apparatus 1. The customer apparatus 1 functions as a commodity ordering apparatus, and, as shown in the figure, can be implemented by a computer of a general configuration, comprising a CPU 11, a main memory 12, an external storage 13 such as a hard disk drive, a reader 14 for reading data, a program, or the like from a portable storage medium 15 such as a CD-ROM, DVD-ROM, or the like, an input device 16 such as a keyboard, mouse, or the like, a display unit 17 such as a CRT display, a communication device 18 for communication with the store apparatus 2 through Internet 3, and an interface 19 in charge of data transmission and reception between the above-mentioned components.

The external storage 13 stores an OS (Operating System) 131 for generally controlling operations of the computer, a WWW browser program 132, and a communication program 133. Of course, other programs may be stored, if





233, a giving points management program 234, a commodity database 235, a customer database 236, a point setting file 237, and a Web generating data file 238. Of course, other programs may be stored, if necessary.

5       The CPU 21 loads the WWW server program 232, the communication program 233 and the giving points management program 234 onto the main memory 22, to execute them. By this, a WWW server 211, a communication processing part 212 and a giving points management part 213 are realized  
10   on the computer.

      The WWW server 211 opens data of the HTML format to the public, so that the WWW browser 111 of the customer apparatus 1 can browse it utilizing HTTP.

      The communication processing part 212 controls the  
15   communication device 28, to process various protocols for the WWW server 211 to communicate with the customer apparatus 1.

      The giving points management part 213 receives setting on points to be given to a customer in purchasing  
20   a commodity, and records it into the point setting file 237.

      The commodity database 235 stores, for example as shown in Fig. 4, a commodity ID (i.e., a code for identifying a commodity) 2351, a commodity name 2352, a selling price  
25   2353, a property 2354 of the commodity, for example classified into "household electric appliance", "game machine", and "software", and image data 2355 for generating an image of the commodity, relating these fields with one

another.

The customer database 236 stores, for example as shown in Fig. 5, a customer ID 2361 for identifying a customer, a customer name 2362, an E-mail address 2363, a commodity delivery address 2364, information required for settling 2365 such as credit card information, the number of points 2366 obtained by the customer, and a purchase history 2367 recording a purchased commodity and its date of purchasing, relating these fields with one another.

The point setting file 237 is a file for storing information set in relation to giving of points, and stores, for example as shown in Fig. 6, a commodity ID 2371, and a point rate 2372, relating these fields with each other.

In the present embodiment, the first line 237a of the point setting file 237 stores a basic point rate, and specific point rates applied to specific combination of commodities are stored from the second line and downward 237b, 237c, .... Here, a specific combination of commodities is expressed by connecting a plurality of commodity IDs using "&". The basic point rate and specific point rates will be further described below.

The Web page generating data file 238 stores a page file, template files, and the like for generating Web pages. The WWW server 211 generates Web pages referring to this file.

Next, operation of the network sales system having the above-described configuration will be described.

The network sales system performs processing in which



5 This rate is referred to as a specific point rate.

10 A, a commodity B, and a commodity C.

The store can use the giving points management part 213 to set the basic point rate (S102) and to set the specific point rates (S103). When the giving points management part 213 receives a request of execution from the store, the giving points management part 213 displays a giving points setting screen 400, for example as shown in Fig. 8, on the display unit 27.

25           The specific point rate input area 402 has a commodity  
area 4021 for specifying combinations of commodities, and  
a point area 4022 for inputting point rates.

Previous to displaying this screen, the WWW server

211 refers to the point setting file 237 to obtain values of the already-set basic point rate etc., and displays those values in the basic point rate input area 401 and the specific point rate input area 402 so that the already determined values can be confirmed on this screen 400.

The store uses the input device 26 to input a value into the basic point rate input area 401, or to modify the value in that area.

Further, in the specific point rate input area 402, combinations of commodities, and specific point rates can be inputted or modified. Or, already-inputted combinations and specific point rates can be deleted.

As a method of specifying a combination of commodities, a combination can be specified by connecting IDs of commodities to be combined using "&". Of course, without limited to this, names of commodity may be inputted, each being separated by a comma, for example.

In the present embodiment, in the specific point rate input area 402, a specific point rate applied to one combination of commodities is inputted in each line.

When the giving points management part 213 receives a click of the OK button 403, the giving points management part 213 records the data inputted in the basic point rate input area 401 and the specific point rate input area 402, into the point setting file 237.

Here, the screen for specifying combinations of commodities is not limited to the present example, and may have various forms. For example, the commodity database

235 may be referred to, in order to display a list of commodities on a specific point rate setting screen 410 for receiving directions on a combination, for example as shown in Fig. 9.

5           In this figure, the specific point rate setting screen 410 has a commodity list area 411 for displaying a list of commodity names, a commodity check area 412, a specific point rate input area 413, a next setting button 414, and an end of setting button 415.

10           In the present example, first, commodities relating to a specific combination are set. The store can click the commodity check area 412 corresponding to a commodity constituting a specific combination, and then, can input a point rate applied to this specific combination into the  
15           specific point rate input area 413. Then, the next setting button 414 or the end of setting button 415 is clicked to register the setting.

          Namely, when the WWW server 211 receives the click of the next setting button 414 or the end of setting button  
20           415 on this screen, the WWW server 211 records a combination of the commodities whose commodity check area 412 is clicked, into the point setting file 237, relating that combination with the point rate inputted in the specific point rate input area 413.

25           When the received button is the next setting button 414, the commodity check area 412 and the specific point rate input area 413 are cleared, and the present screen is regenerated, to accept information on another

combination of commodities. On the other hand, when the received button is the end of setting button 415, the present screen 410 is finished.

Hereinabove, has been described the processing in which the store apparatus 2 receives setting of points to be given.

Next, will be described processing in which the store apparatus 2 receives access of the customer apparatus 1 and provides the online shop.

Fig. 10 is a flowchart for explaining operation of the store apparatus 2 in that case.

When the WWW server 211 receives access of the customer apparatus 1 through the communication processing part 212, then, the WWW server 211 makes the WWW browser 111 of the customer apparatus 1 browse a Web page.

First, the WWW server 211 presents an authentication screen 500, for example as shown in Fig. 11, to the WWW browser 111, to perform authentication processing (S201). As shown in the figure, this authentication screen 500 has a customer ID input area 501, a password input area 502, an OK button 503, and a new registration button 504. Here, data for generating screens of Web pages is stored in the Web generating data file 238, and the WWW server 211 generates the Web pages in accordance with prescribed screen transition rules referring to the Web generating data file 238.

A customer who has already registered with this online shop, namely a customer who has registered his information



such as a customer name, an E-mail address, commodity delivery address, etc. into the customer database 237 can undergo authentication processing by inputting its own customer ID and password into the customer ID input area 501 and the password input area 502 through the input device 16 and by clicking the OK button 503.

Namely, receiving this information, the WWW server 211 performs the authentication processing referring to the customer database 236 (S201).

On the other hand, an unregistered customer can click the new registration button 504 to display a new registration screen (not shown) for performing new registration processing. In the new registration screen, information to be recorded into the customer database 236 is inputted, to register as a customer. Receiving this information, the WWW server 211 records the information into the customer database 236.

Next, the WWW server 211 presents Web pages showing commodities, to the customer apparatus 1 (S202). The Web pages showing commodities may be of a hierarchical structure, for example. Fig. 12 is a diagram explaining an example of transition of the Web pages in that case. The WWW server 211 presents a commodity catalog selection screen 510 onto the display unit 17 of the customer apparatus 1 that has finished the authentication processing. The commodity catalog selection screen 510 has a group of buttons 511 indicating properties of commodities, such as "household electric appliance", "game machine", "software", and the

like, for example.

When a click of one of the buttons 511 is received, the WWW server 211 presents a commodity list screen 520 belonging to that property, to receive designation of commodities to purchase (S203).

Fig. 13 is a view showing an example of the commodity list screen 520. This screen may have been prepared in advance and recorded in the Web generating data file 238, or may be dynamically generated for each displaying, referring to commodity data recorded in the commodity database 235. In that case, it is convenient to use a Web page template having a prescribed layout.

In the present figure, the commodity list screen 520 has an area 521 for displaying commodity names, an area 522 for displaying selling prices, an area 523 for displaying commodity images, purchase buttons 524, a purchase procedure button 525, a return button 528, a basic point rate display area 526, and a specific point rate display area 527.

A purchase button 524 is used for designating a corresponding commodity as a commodity to be purchased. Receiving a click of this button 524, the WWW server 211 records a list of commodities to be purchased in a temporary file in the external storage.

The purchase procedure button 525 is a button for entering purchase procedure with respect to the commodity to be purchased.

The return button 528 is a button for regenerating



The WWW server 211 refers to the temporary file, which records commodities to be purchased, and to the point setting file 237, for searching the group of commodities to be purchased, to confirm if there exist a specific combination of commodities recorded in the point setting file 237.

When a specific combination of commodities is extracted, then, specific points to that commodity are calculated as a value obtained by multiplying the total of their selling prices by their specific point rate. Of course, when a plurality of such combinations are included, similar operation is performed for each of the combinations, and the total sum becomes the specific points.

With respect to the other commodities, the total sum of the selling prices is multiplied by the basic point rate to obtain the basic points.

Then, the specific points and the basic points are added to obtain the points to be given.

When the calculation of the points to be given is completed, the WWW server 211 presents a purchase procedure screen 530, for example as shown in Fig. 14, on the display unit 17 of the customer apparatus 1 (S205).

As shown in the figure, the purchase procedure screen 530 includes a list of commodities to be purchased 531, a purchase amount display area 532, a giving points display area 533, a delivery address display area 534, a payment method display area 535, a purchase decision button 536, and a return button 537 for regenerating the commodity list

screen 520.

The WWW server 211 refers to the customer database 236, extracts information on the delivery address and the method of payment registered for each customer in advance, and displays the obtained information in the delivery address display area 534 and the payment method display area 535, respectively. Here, this screen may be used also for receiving alteration of commodities to purchase, alteration of the delivery address, alteration of the method of payment, or the like.

When the WWW server 211 receives a click of the purchase decision button 536, the WWW server 211 adds the number of points displayed in the giving points display area 533 to the number of points 2366 in the customer database. Further, the WWW server 211 adds the information on the purchase date and purchased commodities to the purchase history 2367 in the customer database 236.

Here, although timing of giving the points can be decided arbitrarily, the points may be added to the customer database at the time of the delivery procedure not at the time when the purchase is decided. This is because, an online shop has a feature that an order and delivery of the commodity are not carried out at the same time. If points are given at the time of receiving an order, troublesome adjustment of points is required when order cancel or the like arises in the period between the reception of the order and the delivery of the commodity. In particular, this problem becomes larger in the case of an

advance order. In that case, information that relates a customer ID to the number of given points may be temporarily recorded separately from the number of points 2366 in the customer database 236. Then, at the time of delivery, the temporarily-recorded points can be added to the number of points in the customer database 236 based on that information.

By the above mentioned processing, the processing for providing the online shop in the store apparatus 2 is completed. Based on the information received through a series of processes, the store performs the procedure of delivery of the purchased commodities to the customer. Further, according to the predetermined method of settlement, the settlement processing of the amount of purchase is performed.

Next, a second embodiment of the present invention will be described. In the first embodiment, a specific point rate for a specific combination of commodities is applied when those commodities are purchased at the same time.

In the second embodiment, a specific point rate is applied also when a specific combination of commodities is purchased in a certain period determined by a store in advance.

The basic configuration of the second embodiment of the present invention is similar to the first embodiment, and accordingly, differences will be described mainly. Further, with respect to a part having no difference, the

same reference numeral is used in the description.

First, will be described difference in the processing in which the store apparatus 2 receives setting of points to be given.

5 In the second embodiment, in place of the point setting file 237 shown in Fig. 6, a point setting file 337 shown in Fig. 15 is used.

As shown in the figure, the point setting file 337 stores a start date 3373 and an expiration date 3374, in addition to a commodity ID 3371 and a point rate 3372, relating those field one another.

Here, the start date and expiration date defines the start and the end of a period in which a specific point rate is applied. When a specific combination of commodities is purchased within this period (not necessarily at the same time), the specific point rate is applied.

Accordingly, in the processing in which the store apparatus 2 receives setting of points to be given, a start date 6023 and an expiration date 6024 are set, in addition to a specific combination of commodities 6021 and a specific point rate 6022, in a giving point setting screen 600, for example as shown in Fig. 16.

Hereinabove, have been described the differences in the processing in which the store apparatus 2 receives setting of points to be given.

Next, will be described differences in the processing in which the store apparatus 2 receives access of the

customer apparatus 1 and provides the online shop, referring to the flowchart shown in Fig. 10.

Fig. 17 is a view showing an example of a commodity list screen 620 in the second embodiment. Here, the processing before displaying that screen 620 is similar to the first embodiment.

In this figure, an area 627 for displaying specific point rates includes an area 6273 for displaying application periods. Periods shown in the application period display area are displayed by the WWW server 211 referring to the start date 3373 and the expiration date 3374 of the point setting file 337.

Processing for receiving designation of commodities to purchase (S203) is similar to the first embodiment.

When designation of commodities to purchase is received and click of the purchase procedure button 525 is received, the WWW server 211 performs the giving point calculation processing (S204).

The WWW server 211 refers to the temporary file recording the commodities to be purchased, the purchase history 2367 in the customer database 236, and the point setting file 237, in order to judge if a specific combination of commodities recorded in the point setting file 237 is included in the group of commodities to be purchased, or in the group of commodities to be purchased and the group of commodities recorded in the purchase history 2367. Here, among the purchased commodities recorded in the purchase history 2367, the judgment is performed only with respect



to the commodities whose purchase dates are included in the periods defined by the start dates 2273 and the expiration dates 3374 recorded in the point setting file 237.

5           When specific combination of commodities are extracted, specific points with respect to those combinations are calculated by multiplying the total of selling prices of each combination by the specific point rate concerned. However, when a commodity in the specific  
10 combination is recorded in the purchase history 2367, points obtained by multiplying the selling price of that commodity by the basic point is subtracted to calculate the specific points. This is performed to avoid duplication of the points given to the commodity recorded in the purchase  
15 history 2367.

          With respect to the other commodities, the basic points are calculated by multiplying the total of the selling prices by the basic point rate. Then, the specific points and the basic points are added to obtain the number  
20 of points to give.

          Processing thereafter is similar to the first embodiment.

          Hereinabove, have been described the differences in the process in which the store apparatus 2 receives access  
25 of the customer apparatus 1 and provides the online shop.

          The present invention is not limited to the above-mentioned embodiments, and may be variously modified within the gist of the invention.

For example, the number of points given to purchase of a specific combination of commodities may not be proportional to the purchase price, but may be a constant number of points. Or, an additional number of points (bonus points) may be given in addition to the number of points calculated with the basic point rate.

Further, in the above-described embodiments, the apparatus used by the store for setting the points to be given and the apparatus used for setting up the online shop are the same apparatus. However, these apparatuses may be separated. In that case, the apparatus on which the store sets up the online shop may be accessed through Internet, and a Web page may be used to set points to be given.

As described above, the present invention can excite customers' will to purchase specific commodities.